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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,716	03/14/2001	Xianbin Wang	21046.P008	5815

7590 08/17/2004

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EXAMINER	
BAYARD, EMMANUEL	

ART UNIT	PAPER NUMBER
2631	5

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/808,716	WANG ET AL.	
	Examiner	Art Unit	
	Emmanuel Bayard	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-18 and 33-35* is/are allowed.

6)☒ Claim(s) *19-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 20-XXX are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 20, 22 and 25-26 recite the limitation "the hybrid attenuator" in line 2. There is insufficient antecedent basis for this limitation in the claim.

4. Claims 21, 23-24 and 27-30 are likewise rejected because they depend on a base rejected claim.

5.

6. Claim 26 recites the limitation "the non-linear attenuator" in line 6. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 27 recites the limitation "the second digital non-linear attenuator" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

8. Claims 28-30 are likewise rejected because they depend on a base rejected claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 19 and 31-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Ghanadan et al U.S. patent No 6,294,956 B1.

As per claim 19, Ghanadan et al teaches a receiver for a multi-carrier modulation (MCM) communication receiver comprising: a high power amplifier is the same as the claimed (hybrid amplifier) (see figs.15, 17-20 elements 102, 104, 142, 144, 180, 182, 210-216, 274, 276 and col.1, lines 40-41 and col.7, lines 5-7) having an input for receiving a PAPR reduced MCM signal, the PAPR reduced MCM signal comprising a plurality of PAPR reduced data samples, wherein each of the plurality of PAPR reduced data samples comprise an amplitude value, and the hybrid amplifier having an output for providing a PAPR restored MCM signal comprising a plurality of PAPR restored data samples, wherein each of the plurality of PAPR restored data samples comprises a restored amplitude value (see col.2, lines 40-47 and col.3, lines 10-25 and col.5, lines 45-67 and col.6, lines 30-67 and col.7, lines 50-67 and col.8, lines 21-51 and col.9, lines 17-67 and col.12,lines 35-67 and col.13, lines 1-17 and col.14, lines 15-32 see also cols.16-19).

As per claims 31-32, Ghanadan et al does teach a digital signal processor (see col.12, line 51).

Allowable Subject Matter

11. Claims 1-18 and 33-35 are allowed over the prior art of record.

12. Claims 20-30 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: The prior arts of record fail to anticipate or render obvious the following recited features: he hybrid amplifier for linearly amplifying the normalized amplitude values of at least some of the plurality of normalized data o samples when the amplitude values of the at least some of the plurality of normalized data samples satisfy the predetermined amplitude value criteria, and the hybrid amplifier for non-linearly amplifying normalized amplitude values of some other of the plurality of normalized data samples when the normalized amplitude values of the at least some 5 other of the plurality of normalized data samples do not satisfy the predetermined amplitude criteria, and for producing a plurality of amplified amplitude values, the hybrid amplifier having an output for providing a MCM signal comprising the plurality of amplified amplitude values as recited in claim 1. Attenuating the amplitude value of the received amplified amplitude values non-linearly in accordance with a first non-linear function when the received amplified amplitude values are greater than the maximum amplitude value; comparing the amplified amplitude values with the minimum amplitude value; g) attenuating the amplified amplitude values non-linearly in 50 accordance with a second non-linear function when the amplified amplitude values are less than the minimum amplitude value; and providing a restored MCM signal comprising a plurality of PAPR restored data samples representing the linearly attenuated amplitude values, and the non-linearly attenuated amplitude values in accordance with the first and the second non-linear functions as recited in claims 33 and 35.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hamilton-Piercy et al U.S. patent No 5,809,395 teaches a remote antenna driver for radiotelephony system.

Frank et al U.S. patent No 6,636,555 B1 teaches an amplitude limitation.

Shastri et al U.S. patent No 6,128,350 teaches a method and apparatus for reducing peak to average power.

Luz U.S. patent No 5,783,969 teaches a method and system for preventing an amplifier overload condition.

Sarraf U.S. patent No 6,157,812 teaches a system and method for enhanced satellite payload.

McAlear U.S. patent No 6,598,232 B1 teaches a hybrid amplifier regenerator.

Feher U.S patent no 6,757,334 B1 teaches a bit rate agile third generation wireless CDMA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 703 308-9573. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 703 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Bayard
Primary Examiner
Art Unit 2631

8/11/04

EMMANUEL BAYARD
PRIMARY EXAMINER